

Claims

[c1] **WHAT IS CLAIMED IS:**

1. An automated event presentation system for capturing and viewing an event having event participants, comprising:
an omni-directional camera system that provides an omni-directional image of the event and that simultaneously monitors the event participants and films the event;
an automated online broadcasting system that controls the omni-directional camera system and broadcasts the event; and
a viewer platform in communication with the automated online broadcasting system that allows a viewer to view the broadcasted event.

[c2] 2. The automated event presentation system as set forth in claim 1, wherein the omni-directional camera system includes a camera having a wide-angle view of approximately 360 degrees.

[c3] 3. The automated event presentation system as set forth in claim 1, wherein the omni-directional camera system includes a plurality of cameras that combined provide an approximately 360-degree field-of-view.

[c4] 4. The automated event presentation system as set forth in claim 2, wherein the camera includes a wide-angle imaging device.

[c5] 5. The automated event presentation system as set forth in claim 1, wherein the automated online broadcasting system further comprises a switching module that allows switching between of the omni-directional image of the event.

[c6] 6. The automated event presentation system as set forth in claim 1, wherein the omni-direction camera system has a resolution of approximately 1000 by 1000 pixels.

[c7] 7. The automated event presentation system as set forth in claim 1, wherein the automated online broadcasting system further comprises an analysis module for finding and indexing the event participants.

[c8] 8. A method for filming an event having event participants and presenting the filmed event to a viewer, comprising:
filming the event using an omni-directional camera system to provide an omni-

directional image that contains each of the event participants; determining a location of the event participants in the omni-directional image; and providing a user interface to allow the viewer to choose which of the event participants in the omni-directional image to view.

[c9] 9. A computer-readable medium having computer-executable instructions for performing the method recited in claim 8.

[c19] 10. The method as set forth in claim 9, further comprising storing annotations associated with the event and synchronizing these annotations with the event.

[c11] 11. The method as set forth in claim 10, further comprising allowing the viewer to select which of the annotations to store.

[c12] 12. The method as set forth in claim 10, wherein which annotations to store may be selected: (a) while the event is occurring; (b) after the event has occurred.

[c13] 13. The method as set forth in claim 10, wherein the annotations include at least one of:
(a) a whiteboard; (b) a digital chat regarding the event; (c) a digital question and answer session over a computer network.

[c14] 14. The method as set forth in claim 8, wherein the location of the event participants in the omni-directional image is determined by using a speaker detection technique to determine which of the event participants is speaking.

[c15] 15. The method as set forth in claim 14, wherein a multiple camera views may be obtained from the omni-directional image and further comprising using the speaker detection technique to follow event participants that are speaking by switching from one camera view to another camera view.

[c16] 16. The method as set forth in claim 14, wherein the speaker detection technique is a microphone-array sound source localization technique that uses a microphone array and sound source localization algorithms.

[c17] 17. The method as set forth in claim 8, wherein the omni-directional camera system is one of: (a) a single panoramic camera; (b) an array cameras having an approximately 360-degree field-of-view.

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[c18] 18. A method for displaying at least a portion of an omni-directional image capturing an event occurring within an event environment, comprising:
filming the event using an omni-directional camera system having a single camera to produce the omni-directional image;
transmitting the omni-directional image from a broadcasting platform to a viewer platform using a computer network; and
using the viewer platform to allow a viewer to select which portion of the omni-directional image the viewer would like to view.

[c19] 19. The method as set forth in claim 18, wherein the viewer may select to view multiple portion of the omni-directional image.

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[c20] 20. The method as set forth in claim 18, wherein the omni-directional image contains all event participants within the event environment.

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[c21] 21. An automated event presentation system for capturing an event, comprising:
a high-resolution omni-directional camera system that provides an omni-directional image of the event, the omni-directional image containing multiple camera views;
an automated online broadcasting system capable of broadcasting the omni-directional image over a computer network;
a viewer platform in communication with computer network that receives the omni-directional image; and
a virtual director module within the automated online broadcasting system that determines which of the multiple camera views within the omni-directional image to display on the viewer platform by applying a set of expert production rules.

[c22] 22. The automated event presentation system as set forth in claim 21, wherein the virtual director module further comprises a switching module that provides switching between the multiple camera views of the event.

[c23] 23. The automated event presentation system as set forth in claim 22, wherein the switching module provides instantaneous switching between the multiple camera views.

[c24] 24. The automated event presentation system as set forth in claim 22, wherein the switching module is capable of providing negative switching that allows switching to a camera view of a person speaking before the person begins to speak.

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